

### Claims

1. Formulation comprising natural oils and fats containing an osmolyte originating from extremophilic microorganisms and unsaturated fatty acids,  
5 c h a r a c t e r i z e d i n t h a t  
said formulation contains 0.01 to 50 wt. % of at least one osmolyte based on the total weight of the formulation.
2. Formulation according to claim 1, characterized in that said formulation contains 0.05 to 10 wt. %, particularly 0.1 to 5 wt. % of an osmolyte or of  
10 osmolytes.
3. Formulation according to claim 1 or 2, characterized in that it contains 0.01 to 50 wt. % of natural oils and fats.
4. Formulation according to claim 3, characterized in that said formulation contains 0.05 to 10 wt. %, particularly 0.1 to 50 wt. % of natural oils and  
15 fats.
5. Formulation according to at least one of the above claims, characterized in that it contains evening primrose oil (Oleum Oenotherae).
6. Formulation according to at least one of the above claims, characterized in that ectoine, hydroxyectoine, cDPG, DGP, firoin, firoin A and/or diin  
20 nositol phosphate are used as osmolyte.
7. Formulation according to any one of the claims 1 to 6 for cosmetic application to the skin.

8. Cosmetic formulation according to claim 7, characterized in that it is provided in the form of a solution, a suspension, an emulsion, a paste, an ointment, a gel, a cream, a lotion, a powder, a soap, a surfactant-containing cleansing agent, an oil, a lipstick, a lip-care stick, a mascara, an eyeliner, of eye shadowing, rouge, a powder, emulsion and wax make-up, a sunscreen, pre-sun and after-sun preparation, a hair tonic, a plaster, a bandage or spray.

9. Use of an osmolyte originating from extremophilic microorganisms for the stabilization and/or preservation of unsaturated fatty acids.

10. Use according to claim 9, characterized in that the applied osmolyte is present in an amount of between 0.01 and 50 wt. % in relation to the entire formulation.

11. Use according to claim 9 or 10, characterized in that it contains 0.05 to 10 wt. %, particularly 0.1 to 5 wt. % of an osmolyte or of osmolytes.

12. Use according to at least one of the claims 9 to 11, characterized in that ectoine, hydroxyectoine, cDPG, DGP, firoin, firoin A and/or diinositol phosphate are used as osmolyte.

13. Use according to at least one of the claims 9 to 12 for the stabilization of evening primrose oil (*Oleum Oenotherae*).

14. Use of an osmolyte originating from extremophilic microorganisms for the production of formulations for topical applications in the cosmetic and dermatological field.

15. Use according to claim 14 for the production of cosmetic formulations for the tending and care of very dry, irritated, scaly and problematic skin, for the tending and care of inflamed skin in case of atopic dermatitis, psoriasis and other inflammable skin diseases, for the protection and stabilization of human skin cells against physical, chemical and biological influences, in particular UV and IR radiation and denaturizing substances, for the protection of the skin's

microflora, for the stabilization of the natural skin barrier and as free-radical scavenger and/or antioxidants.

16. Use according to claim 14 for the production of medicinal products and/or medicaments for the tending, care, prophylaxis or treatment of atopic dermatitis, psoriasis, other inflammable skin diseases as well as eczema.

17. Use according to any one of claims 14 to 16, characterized in that the osmolyte is ectoine or hydroxyectoine.

18. Use according to at least one of the claims 14 to 17 in the form of a solution, a suspension, an emulsion, a paste, an ointment, a gel, a cream, a lotion, a powder, a soap, a surfactant-containing cleansing agent, an oil, a lipstick, a lip-care stick, a mascara, an eyeliner, of eye shadowing, rouge, a powder, emulsion or wax make-up, a sunscreen, pre-sun and after-sun preparation, a hair tonic, a plaster, a bandage or spray.

19. Use according to claim 18, characterized in that the formulation further contains at least one UV filter, enzymes, vitamins, vitamin derivatives and/or proteins.

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